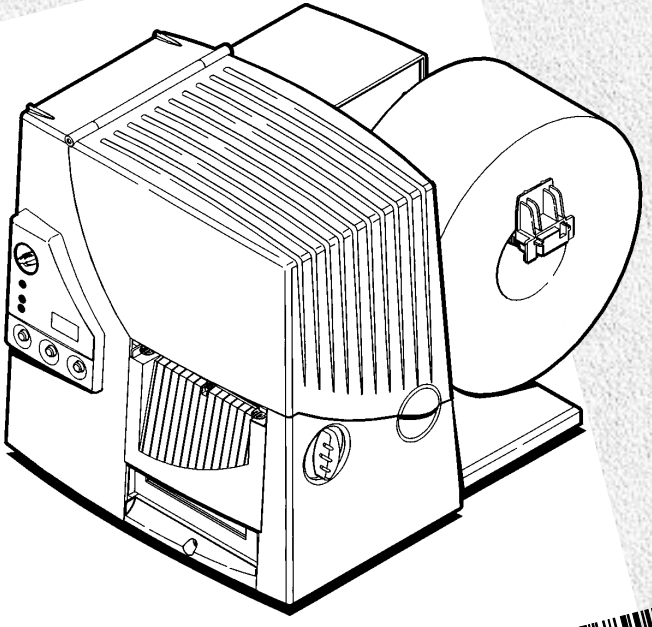
Operator's Handbook

Monarch® 9800™ Series Printers



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PAXAR

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WARNING

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CANADIAN D.O.C. WARNING

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Réglement sur le brouillage radioélectrique édicte par le ministère des Communications du Canada.

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Monarch Marking Systems
P.O. Box 608
Dayton, Ohio 45401

DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

Manufacture's Name : Monarch Marking Systems, Inc.

Manufacture's Address : 170 Monarch Lane, at I75 and SR725
Miamisburg, Ohio 45342
U.S.A.

Declares that the product :

Product Name : Table Top Thermal Printer

Model Number : M9835

Conforms to the following Product Specifications :

Safety :	EN60950 1988/ AM1: 1991 / AM2: 1991
EMC :	C.I.S.P.R. 22, EN 55022 Class B / 1985 FCC Part 15, Subpart B, Class A
EMI :	EN 50082-1 Generic Immunity Standard / Jan. 1992 IEC 801-2 ESD 6KV Contact, 8KV Air Discharge IEC 801-3 Radiated Electromagnetic, 3V/m IEC 801-4 Electrical Fast Transient / Burst EN 60555-2 Line Harmonics
Ergonomics :	NA

Supplementary Information :

Miamisburg, Ohio
Location

May 23, 1997
Date

John Fultz
Signature

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GETTING STARTED

1

The Monarch® 9835™ printer lets you print text, graphics, and bar codes on thermal transfer (ribbon) and thermal direct labels or tags. The 9835 printer prints labels continuously (in one strip) or on-demand (one label at a time).

You can print on die cut, black mark, or non-indexed supplies. Non-indexed supply must be used in continuous mode. See "Setting DIP Switches," to select your supply type.

This chapter includes information about

- unpacking the printer.
- connecting the power cord.
- connecting the communications cable.
- setting DIP switches.
- using the printer's control panel.

Audience

The *Operator's Handbook* is for the person who prints and applies labels.

9445™ Printer Online Emulation

The 9835 printer supports 94x5 emulation. You can send 94x5 data streams to the 9835 printer.

Refer to your 9445 *Programmer's Manual* for information about 94x5 data streams.

Ordering Programmer's Manuals

The *Packet Reference Manual*, which describes how to create format and batch packets for printing labels, how to configure the printer online, how to diagnose printer error messages, and how to perform other advanced techniques can be downloaded from our Web site. You can print this manual or order a hard-copy version (part number **TC9800PM**).

About Monarch® Quick-set Utilities

The Monarch® quick-set utilities are available on our Web site and are free to download. This group of development utilities help you configure the printer and design formats. The Label Designer utility allows you to design fixed or variable field formats. However, you cannot enter variable field data using quick-set. Call Customer Service for information about complete software packages.

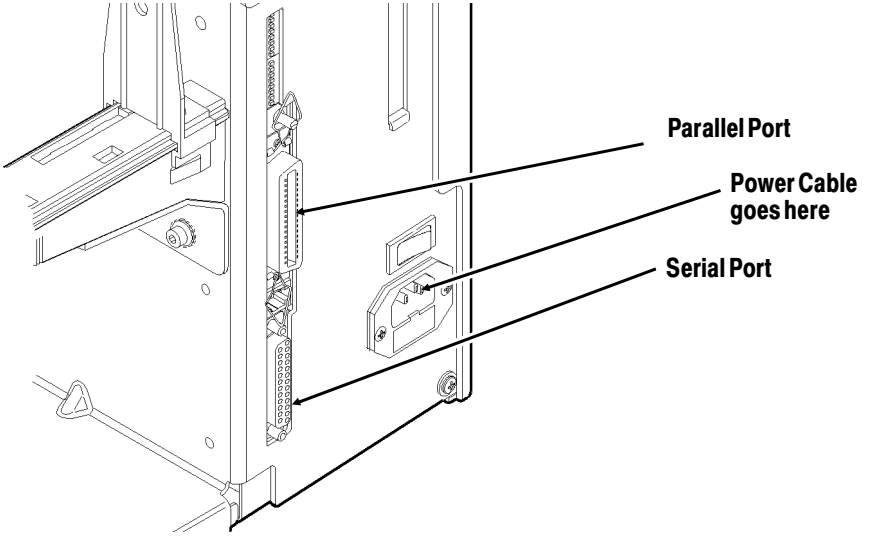
Unpacking the Printer

After you unpack the printer, you should have the 9835 printer, a power cord, and a ribbon take-up core (may already be on take-up reel). Keep the box and packaging material in case the printer ever needs repair.

Connecting the Power Cable

To connect the power cable:

1. Plug the power cable into the socket. Plug the other end of the cable into a grounded electrical outlet.
2. Turn on the printer. Press (I) to turn on and (O) to turn off the printer.



For information about replacing the fuse, see Chapter 5, "Care and Maintenance."

Establishing Communications

Before the printer can accept print jobs from the host, you must:

- Connect the communication cable to the printer and to the host.
- Set the communication values on the printer to match those at the host. (Only required if you are using the serial port.)

Connecting the Communication Cable

Make sure the printer is off before connecting the cable to the communication port.

Ask your System Administrator which method you will use to communicate with the host:

- Serial Communication
  9 to 25 pin cable (Part #118364)
  25 to 25 pin cable (Part #118366)
- Parallel Communication
  IEEE-1284 or Centronics® mode cable (Part #118363) See "Setting DIP Switches" for more information.

Connect the communication cable into the appropriate port. Secure the cable with the connecting screws (serial) or spring clips (parallel).

Default Serial Port Communication Values

If you are communicating with the host through the serial port, make sure the printer's communication values match those at the host. The factory default values are:

- Baud: 9600
- Word Length: 8 bit data frame
- Stop Bits: 1 stop bit
- Parity: none
- Flow Control: DTR

To change the printer's communication values, ask your System Administrator or see "Setting DIP Switches."

Setting DIP Switches

To change the DIP switch settings, move the switches to the desired position and then turn on the printer.

If you select Software Controlled, the parameters in Packet F will override the communication settings. Software Controlled uses the **last sent** Packet F settings or the defaults. Turning on the printer activates the DIP switch settings. Make sure the DIP switch settings match the printer's setup for ribbon or supply type.

Upper DIP Switches

	1	2	3	4	5	6	7	8
Baud Rate								
38400	ON	ON	OFF					
19200	ON	OFF	ON					
9600	ON	OFF	OFF					
4800	OFF	ON	ON					
2400	OFF	ON	OFF					
1200	OFF	OFF	ON					
Software Control	OFF	OFF	OFF					
Data Bits								
7 Data Bits				ON				
8 Data Bits				OFF				
Stop Bits								
2 Stop Bits					ON			
1 Stop Bit					OFF			
Parity								
Even						ON	OFF	
Odd						OFF	ON	
None						OFF	OFF	
Parallel Port								
Centronics Mode								OFF
IEEE-1284								ON

Communication settings at the printer must match those at the host. Make sure your host is capable of communicating at the speed you select for the printer.

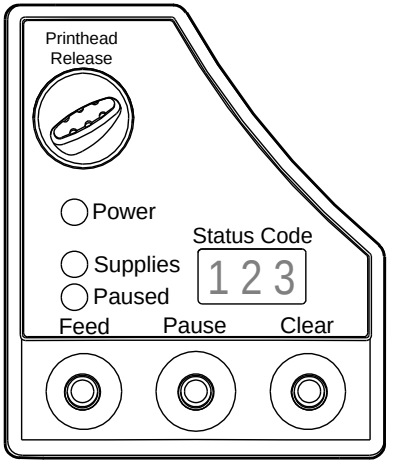
Lower DIP Switches

	1	2	3	4	5	6	7	8
Flow Control								
XON/XOFF	ON	OFF						
RTS/CTS*	OFF	ON						
DTR	OFF	OFF						
Diagnostics								
Normal			OFF					
Diagnostics Mode			ON					
Verifier								
No Verifier				OFF				
Verifier Installed				ON				
Supply Type**								
Die Cut or Edge					OFF	OFF		
Aperture								
Black Mark (center)					OFF	ON		
Continuous					ON	OFF		
Center Aperture					ON	ON		
Ribbon								
Transfer							OFF	
Direct							ON	
Feed Mode								
Disable On-Demand								OFF
Enable On-Demand								ON

* Requires a special cable.
** Aperture supplies are tags or labels with holes (or openings) in them. The supply is sensed using the holes. The holes can be only on the edge or in the center of the supply. If your aperture supply has holes (or openings) on the edge, set the DIP switches for edge aperture supplies. If your aperture supply has holes in the center, set the DIP switches for center aperture supplies.

Using the Control Panel

The control panel helps you check printer status, displays error codes, and allows you to perform some basic printer functions.



Printer Status Lights

Power: The printer shows a steady green light when it is on.

Supplies: The printer shows a blinking amber light when it is out of labels or ribbon, or when you have a supply jam.

Paused: The printer shows a steady amber light when paused.

The printer shows a blinking amber light when there is a data, communication, or data formatting error. See the status code box for the error code.

The printer also shows a blinking amber light when it's ready to print a label in the on-demand mode. See "On-Demand Mode Printing" in Chapter 4 for more information.

Button Functions

Feed:

- Prints a label in the on-demand mode.
- Feeds a blank label if there is no print job.
- Prints a label with error information that is useful to your System Administrator.
- Cuts the supply when pressed and held for two seconds.

Pause: Pauses the current print job or resumes a paused print job.

Feed and Pause: Prints a test label when you press the buttons at the same time.

Feed and Clear: Allows you to adjust print positions from paused mode. See "Adjusting Print Positions" in Chapter 4 for more information.

Clear:

- Clears an error.
- Cancels the current print job.
- Cancels all queued print jobs if pressed for two seconds.

To cancel a single or all queued print jobs, the printer must be in paused mode before **Clear** is pressed.

Status Code Box

The status code box displays a three-digit error code to identify any problem the printer may have. For a description of the problem, look up the error code in Chapter 6, "Troubleshooting."

If there is no error, the display will be blank.

LOADING SUPPLIES

2

This chapter describes how to load:

- a roll of supply
- fan-fold supply
- a roll of tag supply.

There are three types of supplies:

Thermal Direct specially treated thermal supplies that do not use a ribbon for printing.

Thermal Transfer standard supplies that require a ribbon for printing.

High Energy scratch, chemical, and temperature resistant supplies that require a ribbon able to withstand high temperatures. See "Using a High Energy Ribbon" in Chapter 3 for more information.

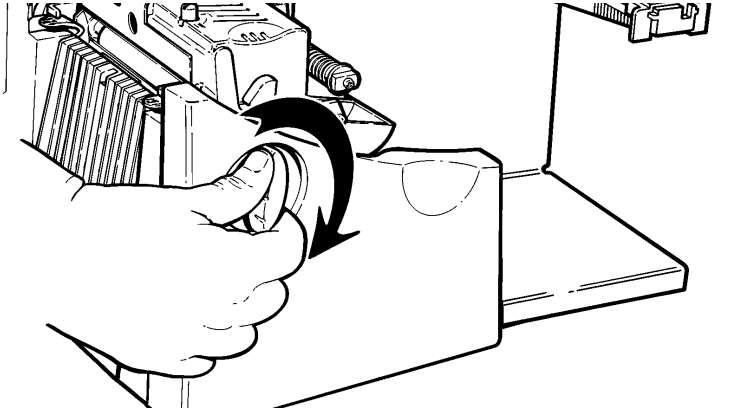
If you are using thermal direct supplies, do not load a ribbon.

If you switch from black mark to die cut supplies, make sure the DIP switches are set correctly. The System Administrator can also send the supply setup packet to change the supply type. Refer to the *Packet Reference Manual* for more information about sending the supply setup packet.

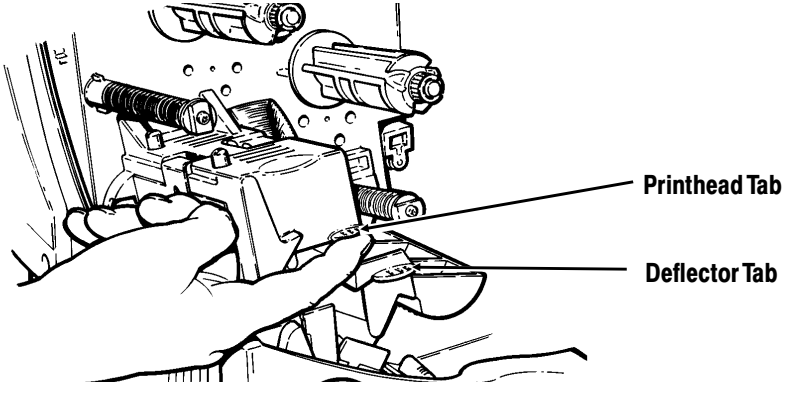
Loading Labels or Tags

Make sure the printer is configured for the correct supply type.

1. Open the cover.
2. Unlock the printhead by turning the retaining latch.

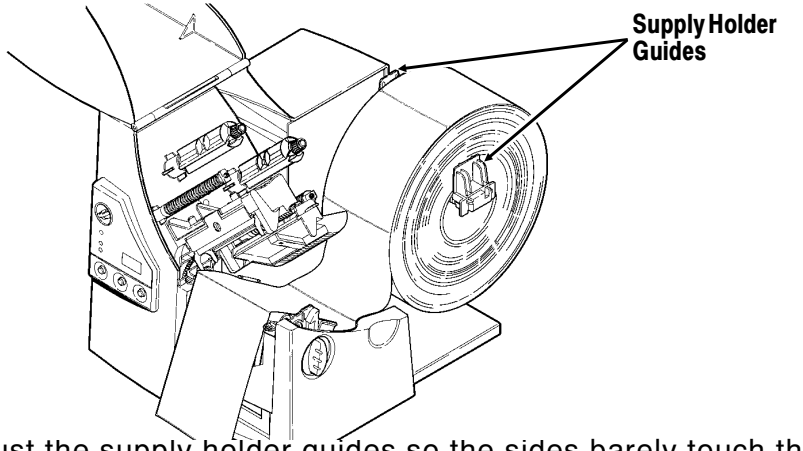


3. Lift printhead assembly using the printhead tab until the assembly locks into place.



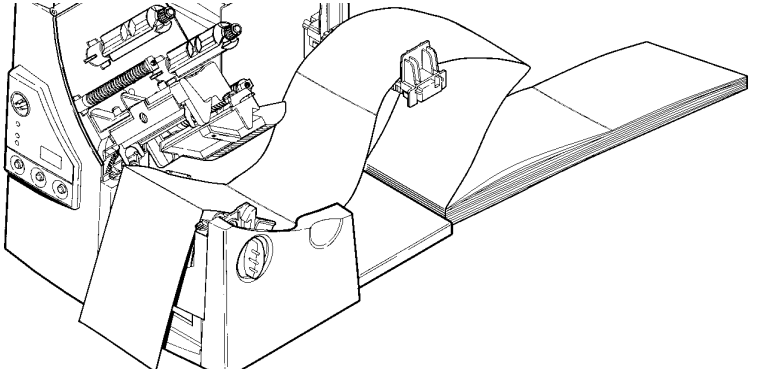
4. Place the roll of supply on the supply holder. For labels, the supply unrolls from the top or the bottom. For tags, make sure the supply unrolls from the bottom, because tag rolls are wound face in.

Do not pick up the printer
by the supply holder.



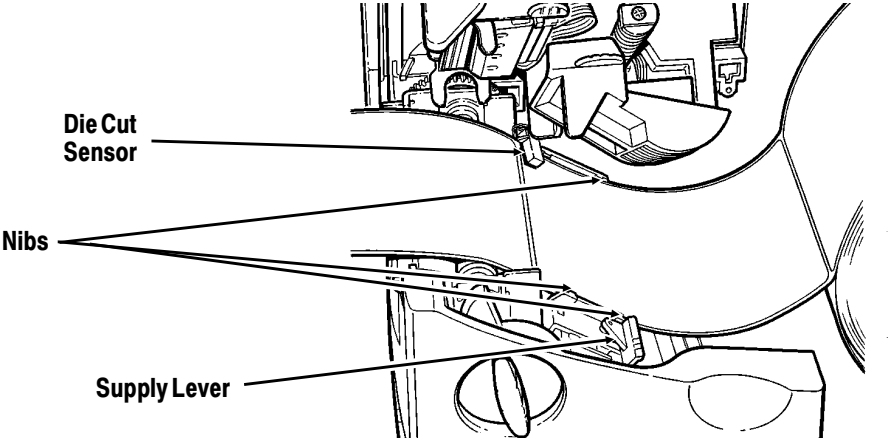
5. Adjust the supply holder guides so the sides barely touch the roll. Make sure the supply roll turns freely.

   If you are using fan-fold supplies, place the supply stack behind the printer, label side facing up.

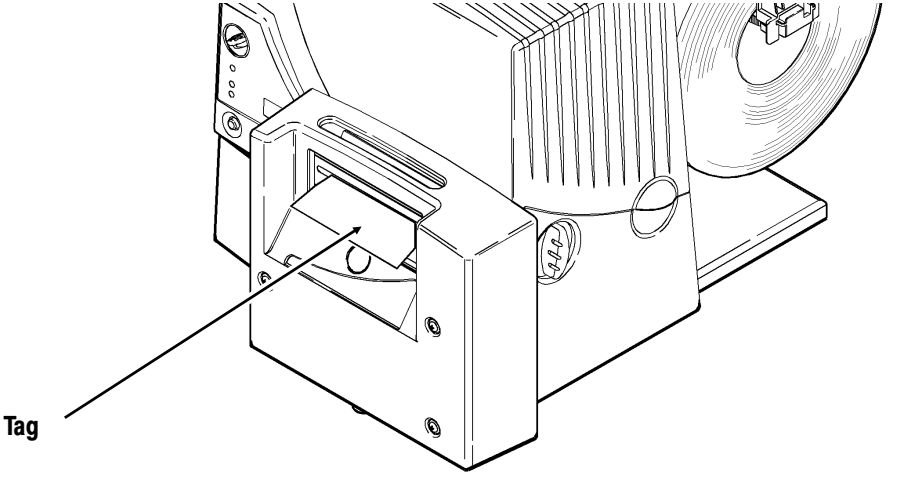


6. Push down on the supply lever to unlock the supply guides.
7. Lay the label strip across the supply guide so that a few inches extend past the front of the printer. Tuck the supply under the nibs and in between the die cut sensor.

For fan-fold supplies, lay the label strip over the supply holder and across the supply guide so that a few inches extend past the front of the printer. Tuck the supply under the nibs and in between the die cut sensor.

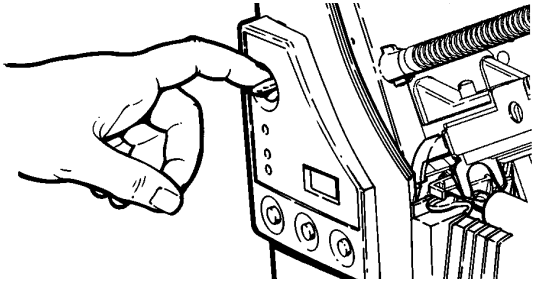


For tag supplies using the optional knife, feed the supply through the knife. Make sure at least 0.5 inches of supply is past the knife.

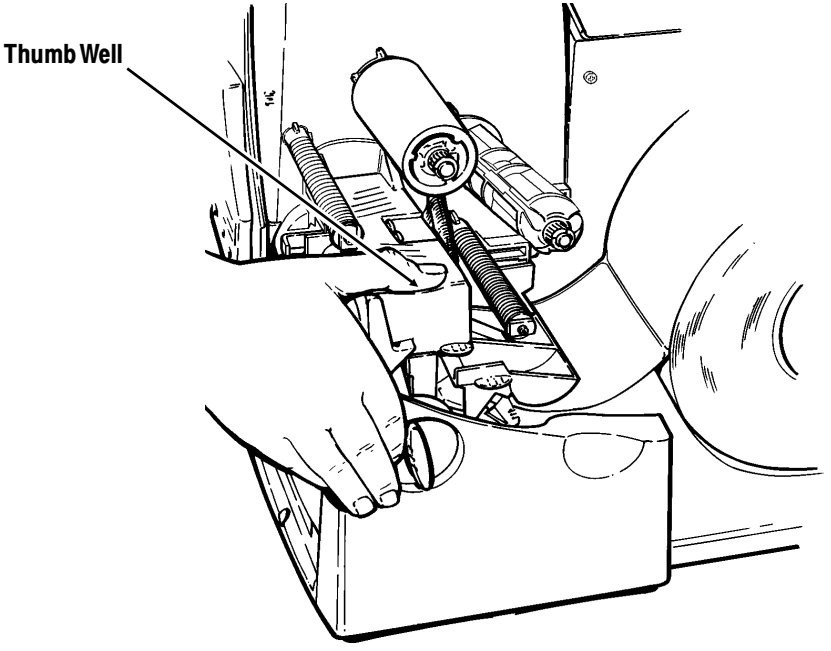


8. Adjust the supply guides so they touch the supply. Push up on the supply lever to lock the supply guides into place.

9. Hold the printhead assembly by the printhead tab while pressing down on the printhead release.



10. Close the printhead by pressing down on the thumb well until you hear it click into place.



11. Close the cover.

12. Press **Feed** to position the supply under the printhead.

    You may need to adjust the wide/narrow knobs depending on the width of your supply. See "Adjusting the Wide/Narrow Knobs" for more information.

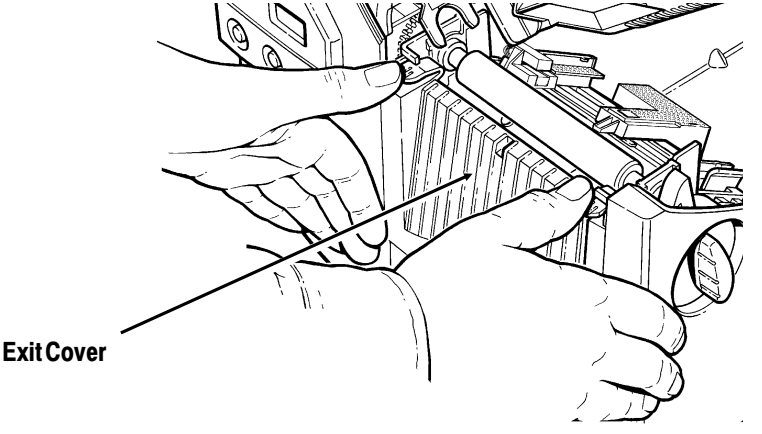
    If the printer will be unused for extended periods of time, we recommend leaving the printhead unlatched.

For Peel Mode:

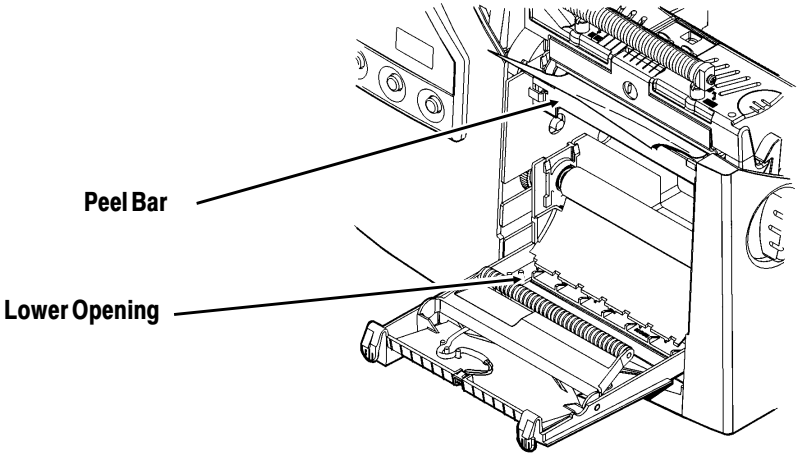
In peel mode, the printer separates the backing paper from the label. The next label is not printed until the completed one is removed from the printer. Make sure the printer is configured for on-demand mode and the correct supply type.

The minimum feed length is 1.5 inches for peel mode. Hold the leading edge of peeled labels when printing on stock longer than six inches. You must use non-perforated supplies for peel mode. Follow the steps for loading supplies from the previous section. Then, follow these steps after you close the printhead.

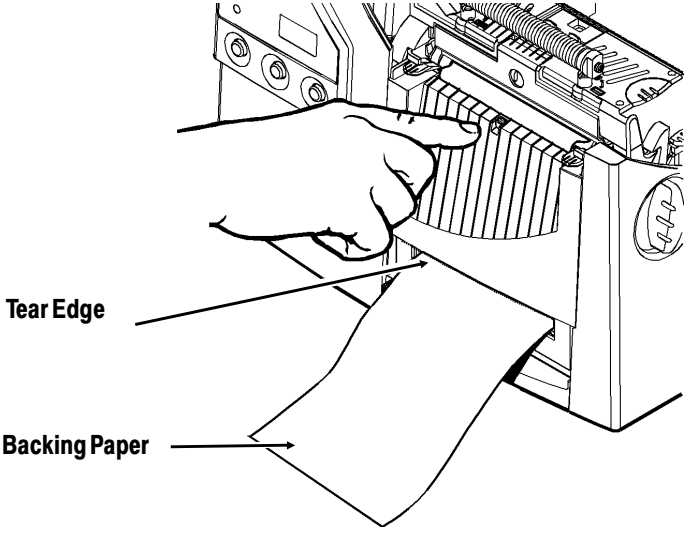
1. Remove the labels from the first 10 inches of the backing paper.
2. Press down on the exit cover tabs to open the exit cover on the front of the printer.



3. Feed the backing paper over the peel bar.



4. Feed the backing paper through the lower opening of the exit cover. Close the exit cover. Pull down on the backing paper to remove any slack.



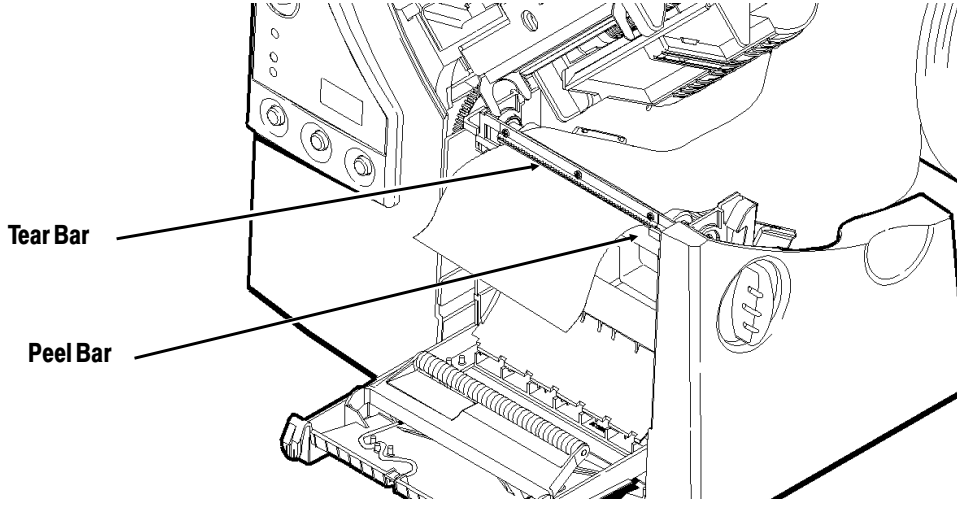
When removing the backing paper, pull up across the saw-toothed tear edge. Make sure the backing paper tears at the edge.

5. Close the printer's cover.
6. Press **Feed** to position the supply under the printhead.

Using the Optional Tear Bar

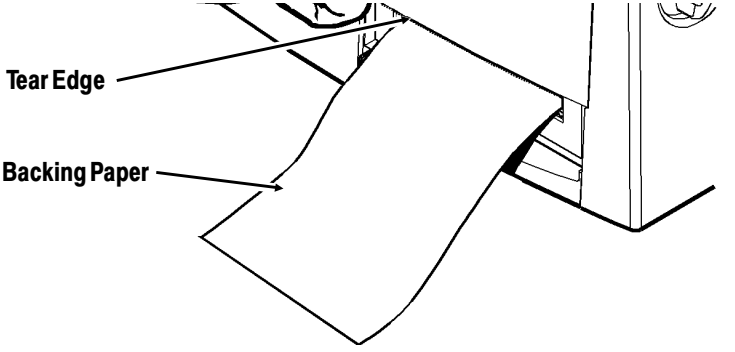
Tear labels against the tear bar. You cannot tear tags with the tear bar. Note the following change to loading labels if you have purchased the optional tear bar:

Slide the supply between the tear bar and peel bar.



Do not tear both label and backing paper at the same time.

- Tear labels against the tear bar.
- Tear backing paper against the tear edge.



Adjusting the Wide/Narrow Knobs

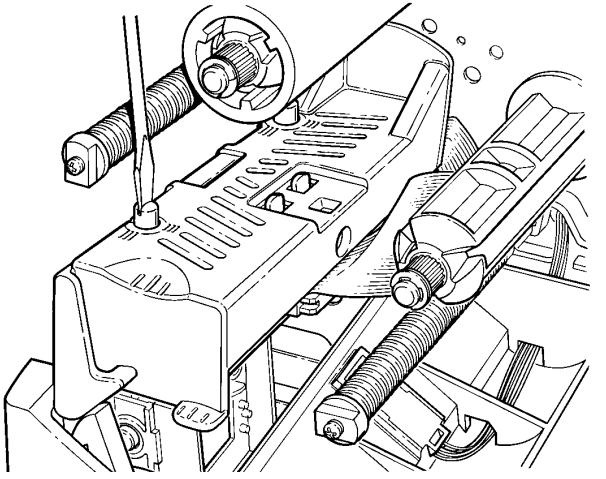
You may need to adjust the two wide/narrow knobs according to the width of your supply. For supply that is more than two inches, adjust the knobs to the wide setting. For supply that is two inches or less, adjust the knobs to the narrow setting.

You must adjust both of the knobs to the same position.

If you experience ribbon smudging in cold, dry environments, adjust the wide/narrow knobs to the wide setting.

For wide supplies, push down and turn the wide/narrow knobs clockwise with a screwdriver.

For narrow supplies, turn the wide/narrow knobs counter-clockwise with a screwdriver until it pops back up.



The adjustment is shown in the wide position.

LOADING RIBBON

3

This chapter describes how to load a ribbon roll.

There are different ribbon requirements for the three types of supplies:

Thermal Direct Supplies	do not use a ribbon for printing.
Thermal Transfer Supplies	require a ribbon for printing.
High Energy Supplies	require a ribbon able to withstand high temperatures.

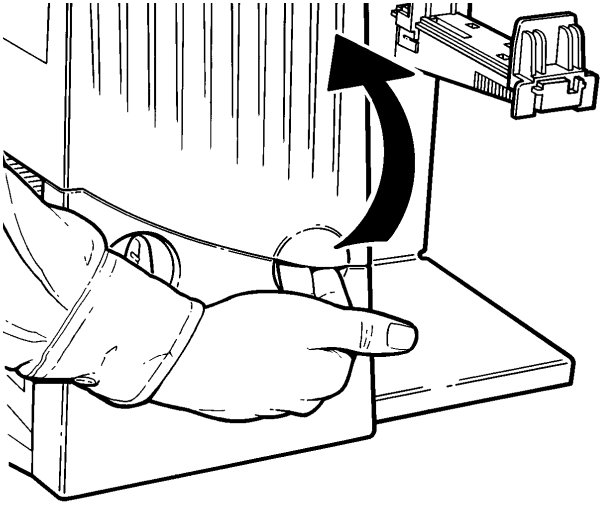
If you are using thermal direct supplies, do not load a ribbon. If you are using high energy supply, be sure to use a high energy ribbon. See "Using a High Energy Ribbon" for more information. If you want to use a high energy ribbon, you must send the supply setup packet every time the printer is turned on.

Loading Ribbon

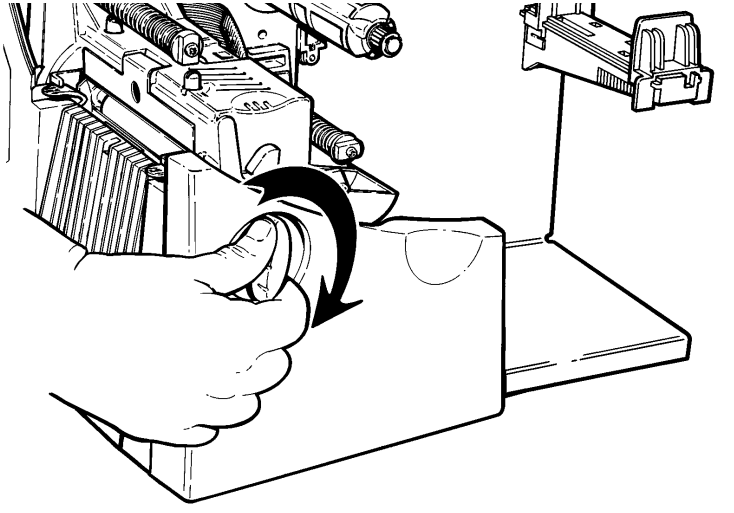
Make sure the printer is configured to use a ribbon.

To load ribbon:

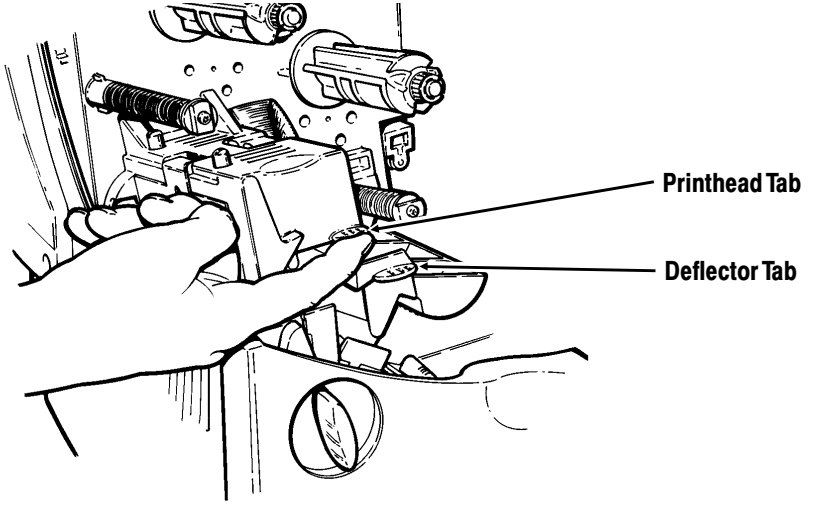
1. Open the cover.



2. Unlock the printhead by turning the retaining latch.



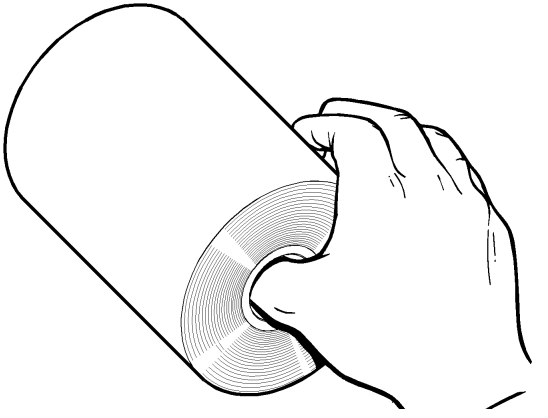
3. Lift printhead assembly using the printhead tab until the assembly locks into place.



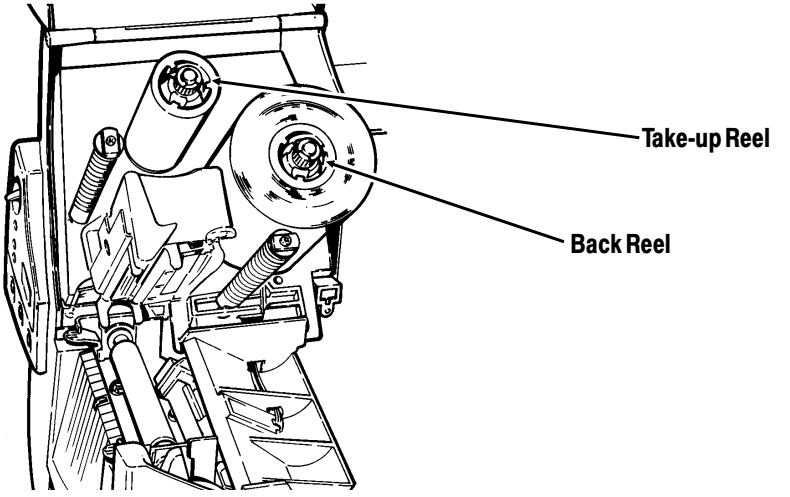
4. Push the deflector tab down.

5. Slide the extra ribbon core on the take-up reel as far as it will go with the "Monarch This End Out" writing facing out. Use your empty ribbon core as the take-up core. The take-up core only fits on the take-up reel one way. (An extra take-up core is available by ordering part number 117961.)

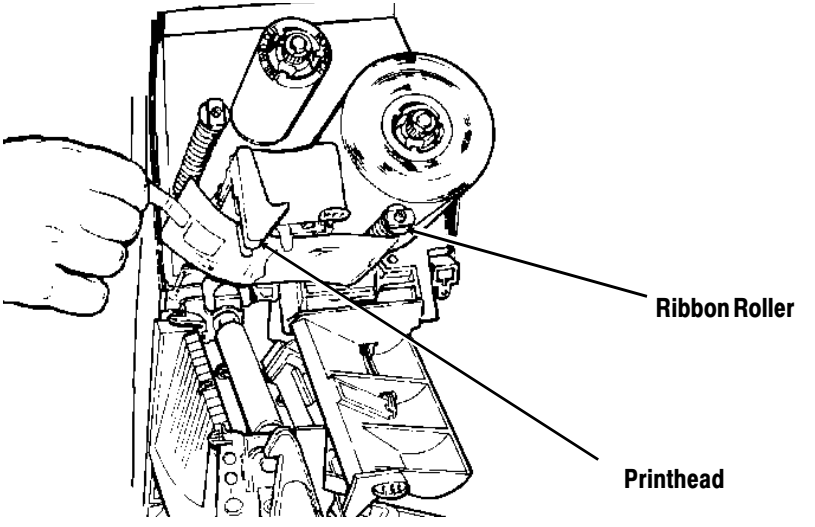
6. Remove the new ribbon from the package as shown. Do not wrinkle or crush the new ribbon.



7. Slide the ribbon onto the back reel as far as it will go. The ribbon roll only fits on the reel one way. Carefully unwind a few inches of ribbon from the bottom of the roll.

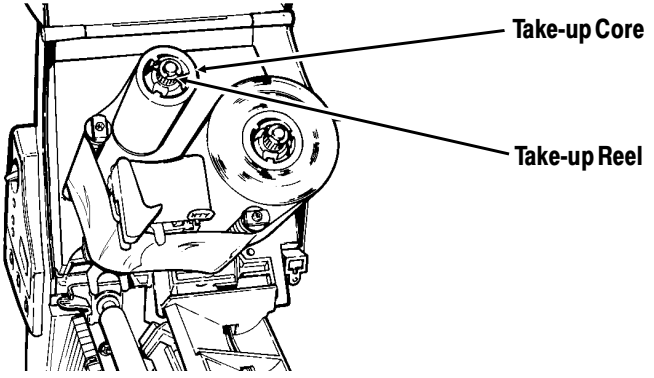


8. Carefully feed the ribbon under both ribbon rollers and printhead as shown.



9. Align the ribbon and make sure it is straight and centered throughout the path.

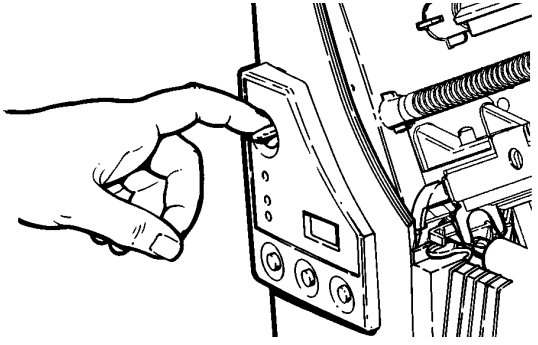
10. Tape the ribbon to the take-up core. ***Do not tape the ribbon to the take-up reel.***



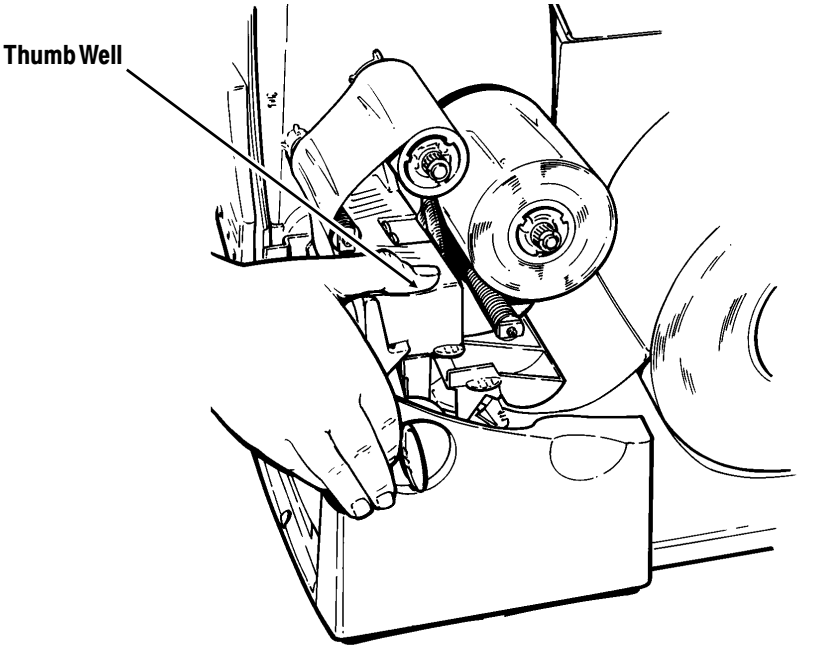
11. Rotate the take-up core until the MONARCH leader is past the printhead.

12. Remove any slack in the ribbon by turning the take-up reel clockwise.

13. Hold the printhead assembly by the printhead tab while pressing down on the printhead release.



14. Close the printhead by pressing down on the thumb well until you hear it click into place. Close the cover.



Using a High Energy Ribbon

High energy ribbon is an option for the 9835 printer. It enables you to print on high energy (TUFF-MARK®) supplies.

When you select high energy ribbon for the printer setting, you are setting the printer to a higher printing temperature. Select this setting only after you have loaded a high energy ribbon and supply or it may damage your printhead. To select a high energy ribbon, send the supply setup packet everytime you turn on the printer.

The high energy setting is lost when you turn off the printer.

High Energy Ribbon Limitations

When using the high energy ribbon option:

- Use a print speed of 2.5IPS (inches per second).
- Printhead warranty is reduced to 100,000 inches.
- Serial bar codes cannot be printed.
- Do not use peel mode.
- No more than 20% of the supply should have print (black coverage).

CAUTION

The high energy ribbon may break or stick to the supply when more than 20% of the supply contains print.

- Only white high energy supply should be used for bar code printing.
- Reverse fonts cannot be used.
- A non-printing area of at least .1 inch (2.54 mm) must exist on the left and right edge of the ribbon.
- Do not print horizontal lines or bars.
- Graphics are limited.

PRINTING

4

This chapter explains how to

- use on-demand mode printing.
- print an error label.
- print batch separators.
- adjust the print positions.

Printing

The host sends online packets containing print jobs to the printer.

To print:

1. Turn on the printer.
2. Download a format and a batch. Refer to the *Packet Reference Manual* for information on downloading print jobs.

   The printer prints a strip of labels.

3. Remove the printed labels.

If the printer will be unused for extended periods of time, we recommend leaving the printhead unlatched.

On-Demand Mode Printing

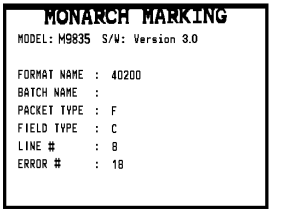
When the 9835 printer is operating in the on-demand mode, the next label prints when the previous label is removed from the printer or when **Feed** is pressed. The Paused light blinks until all the labels in the batch are printed.

If you have purchased the optional peel mode, you must use on-demand printing with peel mode. If you are using peel mode, remove the excess backing paper by pulling up across the saw-toothed tear edge. Make sure the backing paper tears at the edge.

Hold the leading edge of peeled labels when printing on stock longer than six inches. The minimum feed length for peel mode is 1.5 inches. You must use non-perforated supplies for peel mode.

Printing an Error Label

If the printer displays a data error (errors 0-499), press **Feed** to print an error label and continue printing. See your System Administrator about the error label.



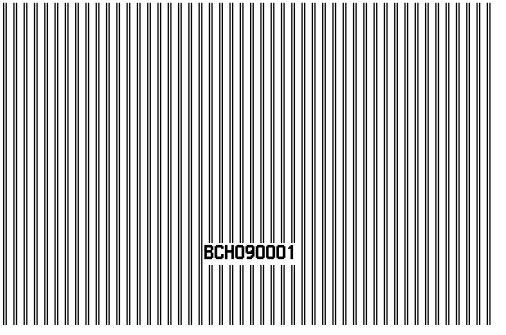
Clearing Batches

All batches are cleared when the printer is turned on. You can also clear all or a single batch by pressing **Clear** after the printer is paused. See "Using the Control Panel" in Chapter 1 for more information.

Using Batch Separators

A batch separator is a striped label that prints in between batches. For non-indexed supply, the batch separator is always six inches long. If you have the Monarch® 928™ stacker installed, the batch separator is 3.66 inches long. The name of the batch is shown on the batch separator.

To use batch separators, refer to the *Packet Reference Manual*.



Adjusting Print Positions

You can adjust the supply, print, margin, or cut positions on the 9835 printer by using the control panel buttons. Make sure a batch is not waiting to print before you adjust the positions.

To change the supply, print, margin, or cut positions:

1. Press **Pause**.
2. Press **Feed** and **Clear** (at the same time) once to select the supply position, twice to select the print position, three times to select the margin position, and four times to select the cut position. These buttons act as toggle switches between the four (supply, print, margin, and cut) position adjustments.

When you select the position to change, the current setting is displayed.

---

3. Press **Feed** to decrease the current position by one dot or press **Feed** for two seconds to decrease the value by 10 dots.
   OR
   Press **Clear** to increase the current position by one dot or press **Clear** for two seconds to increase the value by 10 dots.

If the position has a negative value, the supplies light is on.
After you adjust the position (and release the buttons), the setting is displayed.

---

4. Press **Pause** when you are done making adjustments.

Resend the format so these changes take effect. You cannot change the settings if the printer is paused while printing a batch. Change the settings after the batch is done printing.

Review the following definitions for the different print position adjustments.

Supply Position Adjusts the machine to print at the vertical 0,0 point on the supply. Increase the supply position to move print up, decrease to move print down on the label. The range is -300 to 300 dots.

The supply position adjustment should only be made on inital printer setup. For format adjustments, change the print position.

Print Position Adjusts where data prints vertically on the supply. Increase the print position to move print up, decrease to move print down. The range is -99 to 99 dots.

Margin Position Adjusts where data prints horizontally on the supply. Increase the margin position to move print to the right, decrease to move print to the left. The range is -99 to 99 dots.

Cut Position Adjusts where the tag is cut. The printer adjusts the cut position according to the black marks on the supply. You may need to adjust the cut position up or down for aperture supplies. Increase the cut position to move the cut up, decrease to move the cut down. The range is -300 to 300 dots.

Printing the Euro-Dollar Symbol

You can print the Euro-Dollar symbol (€) online by using **~192** (ASCII) code in the data stream. Your System Administrator can also select the Euro-Dollar symbol by sending the Monetary Formatting Packet (packet D). If you have purchased the optional keypad, you can select Euro-Dollar from the Defaults Monetary Sign Menu.

CARE AND MAINTENANCE 5

This chapter tells you how to

- clear label jams
- clean the printhead and platen roller
- replace a printhead
- adjust print contrast
- replace a fuse.

CAUTION

Do not use sharp objects to clean the printhead. This may damage the printer and void your warranty.

Clearing Label Jams

When you are printing and a jam occurs, the **Supplies** light on the printer's front panel blinks. To clear the jam:

1. Turn off the printer.
2. Open the cover and printhead assembly.
3. If necessary, remove the label roll and ribbon.
4. Remove the jammed labels and reload the label roll.
5. Close the printhead assembly and turn on the printer.
6. Press **Feed** to position the supply under the printhead.

Cleaning

The rate and frequency at which you print determines how often you must clean the printer.

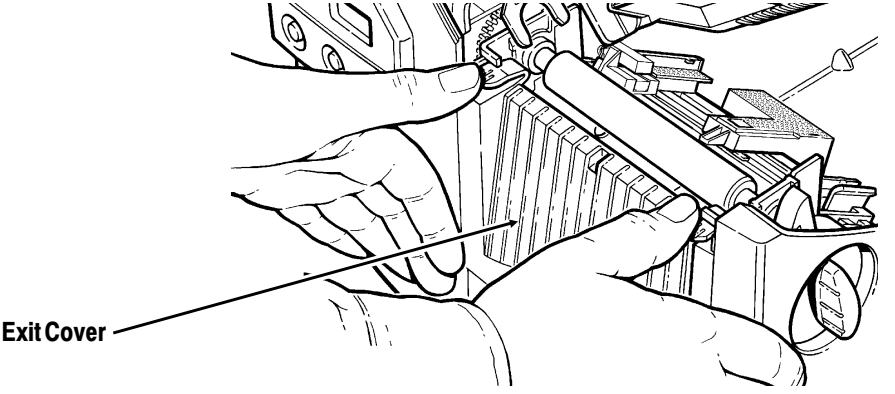
You may need to clean the printhead and platen roller:

- if there is any adhesive build-up in the supply path
- after printing approximately six rolls of supply, after using two ribbons, or whenever you load new supplies
- daily if your printer is in an excessively dirty, hot, or humid environment
- when you see voids in the print as shown.

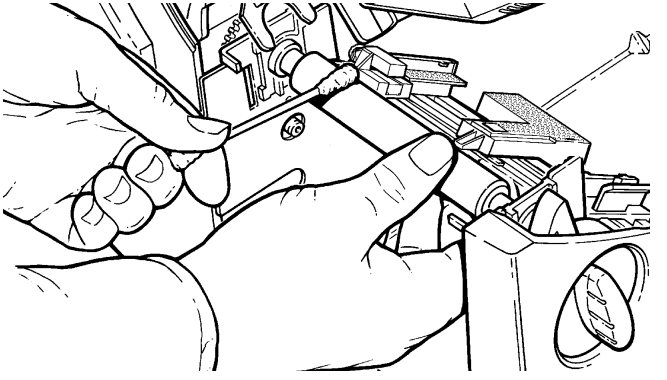
You may have to clean the supply sensor more often if you frequently receive supply error codes.

To clean the printhead, supply sensor, and platen roller:

1. Turn off the printer.
2. Open the cover and printhead assembly.
3. Remove the label roll and ribbon (when cleaning the printhead).
4. Press down on the exit cover tabs to open the exit cover on the front of the printer.

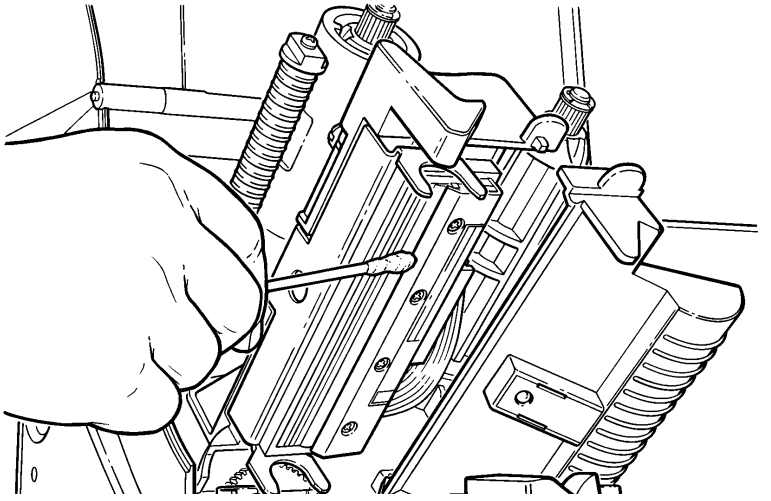


5. Clean the platen roller with a dry cloth or small brush. However, if there is adhesive gum build-up on the platen roller, moisten a cotton swab with isopropyl alcohol. Turn the platen roller with your finger and run the cotton swab or dry cloth across it. Make sure the platen roller is clean all the way around.

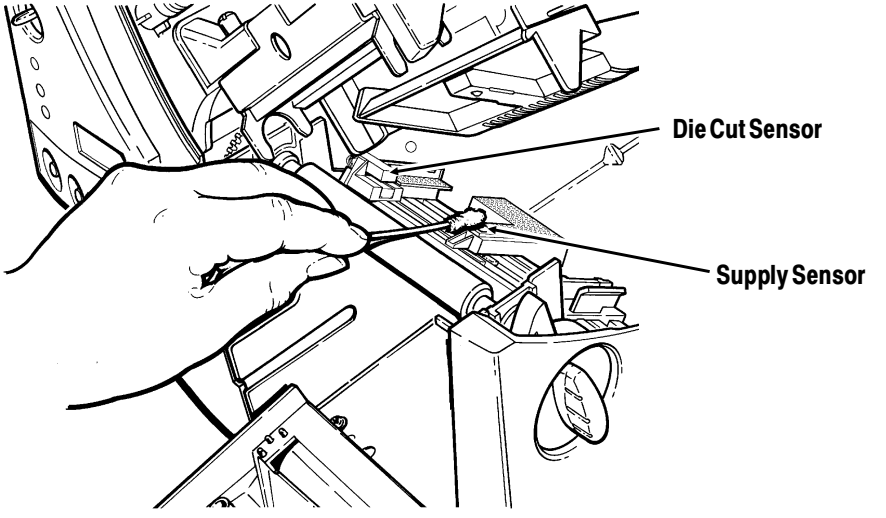


6. Rub the cotton swab across the peel bar and remove any build-up.

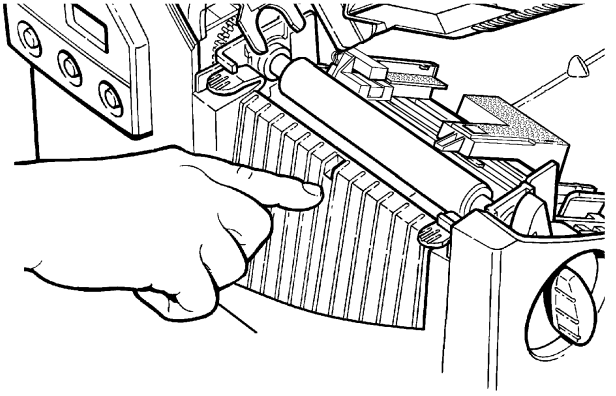
7. Moisten another cotton swab with isopropyl alcohol. Rub the cotton swab across the printhead and remove any build-up.



8. Rub the cotton swab across the supply sensor and die cut sensor and remove any build-up.



9. Clean the build-up in the supply path.
10. Let the printer dry and reload your supplies.
11. Close the exit cover by pushing firmly on it as shown. Both latches will click into place.



12. Close the cover and printhead assembly.
13. Turn on the printer.
14. Press **Feed** to position the supply under the printhead.

Resend your format, batch, and check digit packets.

Replacing the Printhead

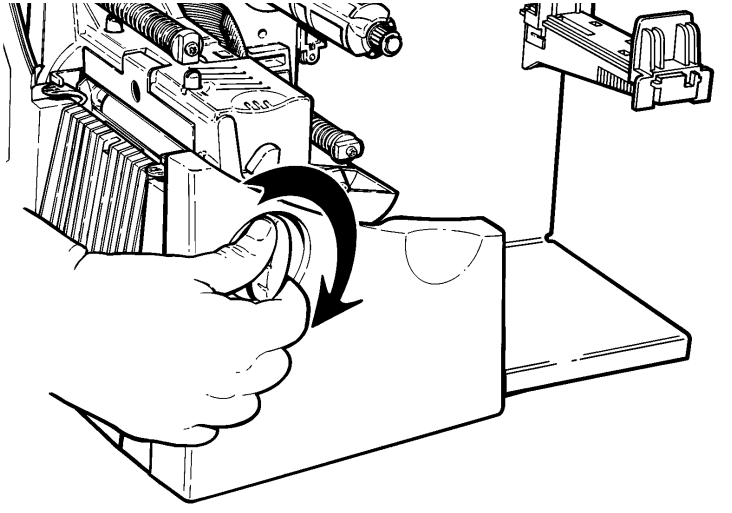
You may have to replace the printhead if it is damaged or worn-out. For example, you may see 616 (bad dot or dots) or 768 (printhead failure) error codes. See Appendix A, "Specifications and Accessories," for the printhead part number.

CAUTION

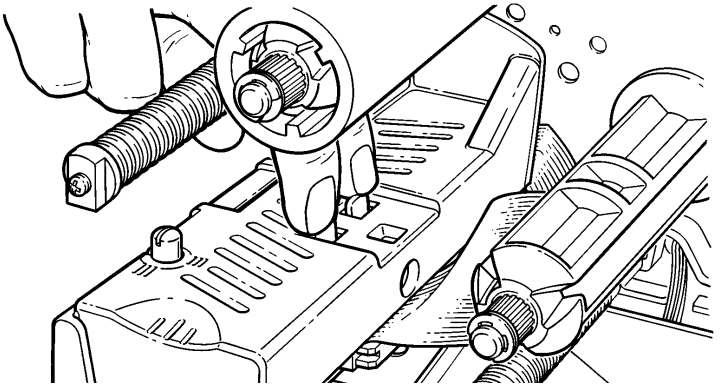
The printhead is sensitive to static electricity, which can damage the printhead or reduce its life. Ground yourself by touching some metal, such as the printer's metal base, before touching the printhead. Clean the printhead to remove any salt or oil left from handling prior to operation.

To replace the printhead:

1. Turn off the printer.
2. Open the cover.
3. Unlock the printhead by turning the retaining latch.



4. Press forward and down on the two latches on top of the printhead assembly as shown. The printhead will drop down.

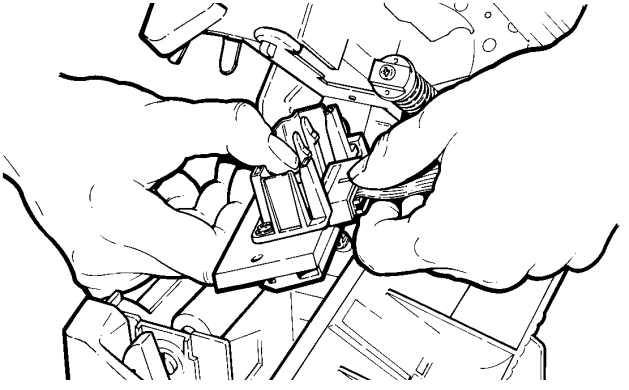


5. Lift the printhead assembly using the printhead tab and push back until the printhead assembly clicks into place.

6. Carefully unplug the cable from the printhead as shown.

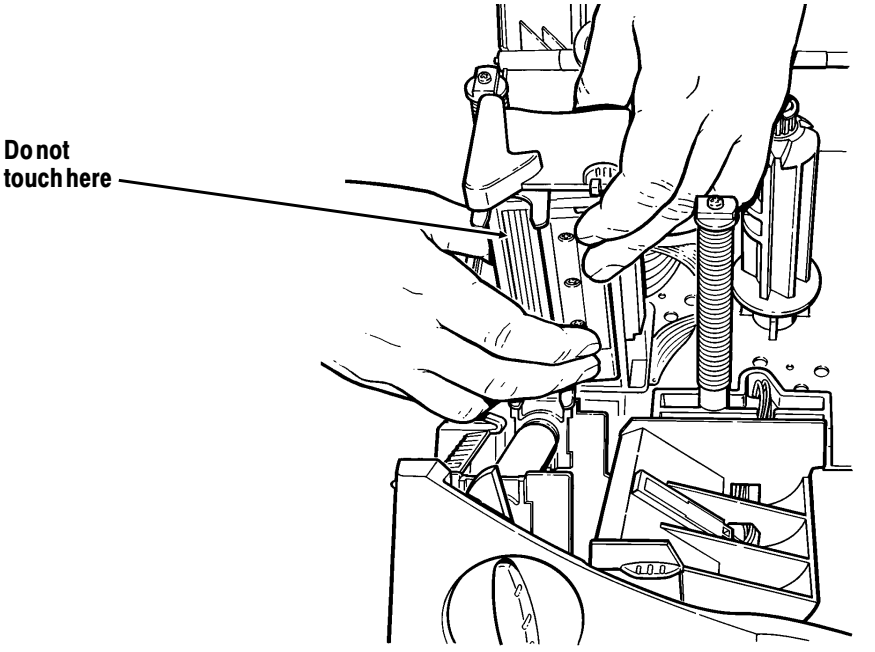
CAUTION

The printhead is sensitive to static electricity, which can damage the printhead or reduce its life. Ground yourself by touching some metal, such as the printer's metal base, before touching the printhead.



7. Carefully plug the cable into the new printhead.

8. Align the new printhead with the tabs.
9. Snap the printhead into place.



Make sure the printhead cable does not touch the ribbon roll.

10. Clean the new printhead with a cotton swab dipped in isopropyl alcohol to remove any salt or oil left from handling.
11. Let the printhead dry and reload your supplies.
12. Close the printhead assembly and the cover.
13. Turn on the printer.
14. Press **Feed** to position the supply under the printhead.

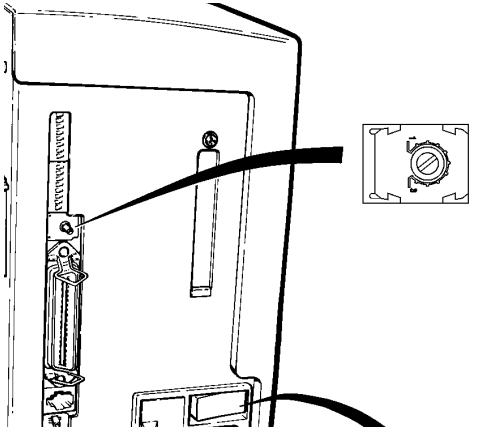
Adjusting the Print Contrast

You may need to adjust the print contrast if the printing is too light or too dark. Having the correct print contrast is important because it affects how well your bar codes scan and how long your printhead lasts.

Using a thin screwdriver, turn contrast knob clockwise for darker print; turn counter-clockwise for lighter print.

You only have to turn the contrast adjuster slightly.

Your System Administrator can adjust the print contrast by sending the print control packet. Refer to the *Packet Reference Manual* for more information. We recommend you check the bar code print quality with a bar code verifier. If you do not have a bar code verifier or scanner, check the bar code visually. A bar code that is in spec has complete bars, clear spaces, and small alphanumeric characters look complete. An in spec bar code may not look as good as one that is too dark, but it has the highest scan rate.



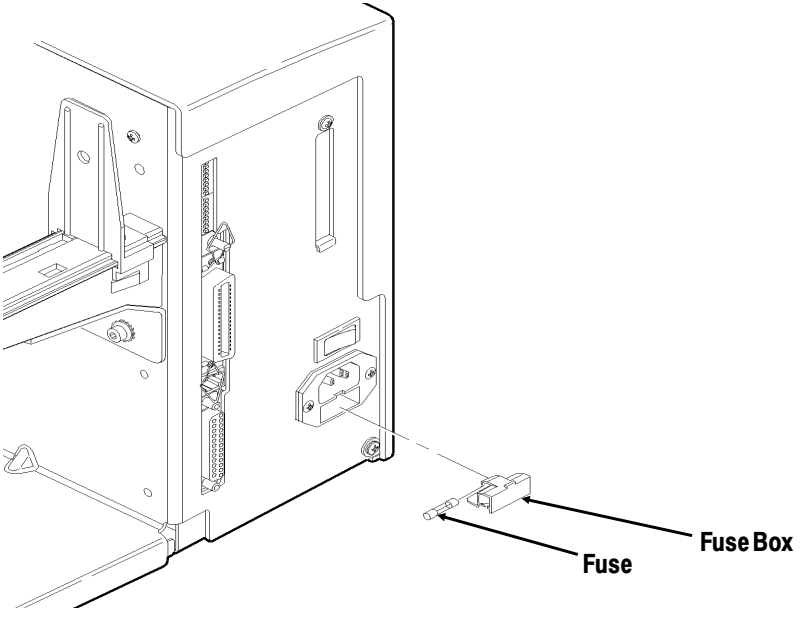
Dark **IN SPEC** **Light**

Replacing the Fuse

The printer is shipped with a 115 volt or a 230 volt fuse.

To replace the fuse:

1. Disconnect the printer from the power source.
2. Use a screwdriver to pry open the fuse box in the back of the printer.



3. Remove the old fuse and insert a new one as shown.
4. Slide the fuse box back into the printer.

TROUBLESHOOTING

6

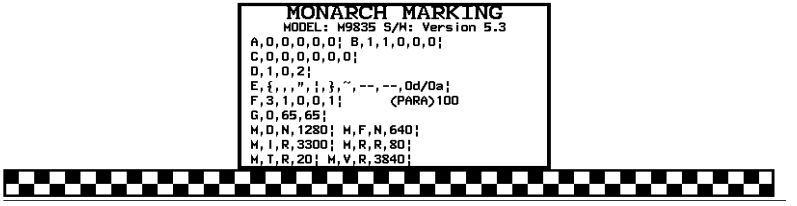
This chapter provides

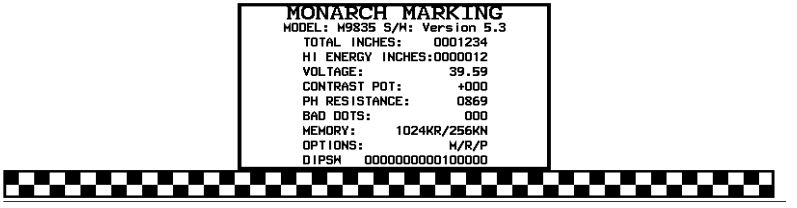
- information about printing a test label.
- solutions to minor printing problems.
- explanations of error messages you may receive while using the printer.

Printing a Test Label

To print test labels:

Press **Feed** and **Pause** simultaneously. Hold for one second and release. Labels similar to these print:





The first label shows the printer's configuration by packet (A-G). The second label shows the model number, software version, stock count, voltage, print contrast, printhead resistance, number of bad dots, installed options, and DIP switch settings. The test label also shows an inch count for the high energy ribbon.

If test labels do not print, press **Feed** and try again. If that does not solve the problem, call Technical Support.

Troubleshooting

This section helps you correct some problems that may occur.

Problem	Action
Error message appears during startup.	Turn off the printer, wait fifteen seconds and then turn on the printer. Call Technical Support if the error message reappears.
Does not print.	Check supply. Check ribbon. Send a corrected format and batch packet.
Does not feed.	Set wide/narrow knobs correctly.
Partially printed data.	Clean the printhead. Send a corrected format packet.
Printing shadows or smears.	Clean the printhead. Change supply. Check ribbon.
Light printing.	Change supply. Adjust the print contrast. Check wide/narrow knobs. Check ribbon.
Heavy printing.	Clean the printhead. Change supply. Adjust the print contrast. Check wide/narrow knobs. Check ribbon.
Voids in printing.	Clean the printhead. Change supply type. Check ribbon. Leave printhead unlatched when not in use.
Serial bar codes do not scan.	Use a print speed of 2.5 IPS. Adjust the print contrast.
Backing paper is wrapped around platen or peel roller.	Carefully remove the backing paper. Make sure the backing paper tears at the saw-toothed tear edge when using backfeed and peel mode.
Blank labels print or 750 series errors.	Clean supply sensors.

If you cannot fix a problem, call Technical Support.

Error Messages

You may receive the following types of error messages:

- Data Errors
- Communication Errors

Some errors numbered 400-438 and 500-574 are internal software errors. Errors numbered 900-999 are hard printer failures. If you cannot clear an error, turn off the printer, wait several seconds and then turn on the printer. Call Technical Support if you receive any error message not listed in this chapter.

Data Errors

Errors 001 to 405 and 429 to 435 are data errors. This type of error indicates that incorrect data was sent to the printer, and the printer is ignoring it. Your System Administrator should correct the packet and send it back to the printer.

Error	Description/Action
001	Format ID number must be **1** to **999**.
002	Name must be **1** to **8** characters inside quotes.
003	Action must be **A** (add) or **C** (clear).
004	Supply length is invalid.
005	Supply width is invalid.
006	Storage device must be **R** (volatile RAM).
007	Unit of measure must be **E** (English), **M** (Metric), or **G** (Dots).
010	Field ID number is outside the range **0** to **999**.
011	Field length exceeds **2710**.

012 Row field position is greater than the maximum stock dimension.

013 Column field position is greater than the maximum stock dimension.

014 Font selector is invalid.

015 Character rotation must be **0** (0 degree), **1** (90 degree), **2** (180 degree), or **3** (270 degree).

016 Field rotation must be **0** (0 degree), **1** (90 degree), **2** (180 degree), or **3** (270 degree).

017 Field restriction must be **V** (variable) or **F** (fixed).

018 Code page selection defined in the field must be **0** (Internal), **1** (ANSI), **2** (DOS 437), or **3** (DOS 850).

020 Vertical magnification must be **1** to **7**.

021 Horizontal magnification must be **1** to **7**.

022 Color must be **B**, **D**, **O**, **R**, or **W**.

023 Intercharacter gap must be **0** to **99** dots.

024 Field justification must be **B** (balanced), **C** (centered), **E** (end), **L** (left), or **R** (right).

025 Data length is too long.

030 Bar code height must be at least **20** (English), **51** (Metric), **40** (Dots), or is not within the supply dimensions.

031 Human readable option must be **0**, **1**, **5**, **6**, **7**, or **8**.

032 Bar code type is invalid.

033 Bar code density is invalid.

040 Line thickness must be **0** to **99** dots.

041 Line direction must be **0**, **90**, **180**, or **270**.

042 The line segment or box end row is defined outside of printable area.

043 The line segment or box end column is defined outside of printable area.

044 Dot pattern for line or box must be "".

045 Line length is defined beyond the maximum length.

046 Line type must be **S** (segment) or **V** (vector).

051 Imaging mode in the graphic header must be **0**.

101 Format referenced by batch not in memory.

102 Print quantity is outside the range **0** to **32000**.

104 Batch mode must be **N** (new) or **U** (update).

105 Batch separator must be **0** (Off) or **1** (On) in the batch control field.

106 Print multiple is outside the range **1** to **999**.

107 Cut multiple is outside the range **0** to **999**.

108 Multiple part supply is outside the range **1** to **5**.

109 Reserved for knife usage.

200 Option number must be **1**, **4**, **30**, **31**, **42**, **50**, **60**, or **61**.

201 Copy length is outside the range **0** to **2710**.

202 Copy start position must be **1** to **2710**.

203 Destination start position must be **1** to **2710**.

204 Source field must be **0** to **999**.

205 Copy type must be **1** (Copy after rules) or **2** (Copy before rules).

206 Increment/Decrement selection must be **I** (increment) or **D** (decrement).

207 Incrementing start position must be **0** to **2710**.

208 Incrementing end position must be **0** to **2710**.

209 The incrementing amount must be **0** to **999**.

210 Security value for a PDF417 bar code must be **0** to **8**.

211 Narrow element value is less than **1** or greater than **99**.

212 Wide element value is less than **1** or greater than **99**.

213 Dimension must be **1** to **30** for a column or **3** to **90** for a row.

214 Truncation code must be **S** (standard) or **T** (truncated bar code).

215 Aspect code must be **C** (columns) or **R** (rows).

216 Option definition must be **S** (set) or **T** (template).

217 Input device must be **D** (Default), **H** (Host), **K** (Keyboard), **N** (None), or **S** (Scanner).

218 Pad direction must be **L** (from left) or **R** (from right).

219 Pad character is outside the range **0** to **255**.

220 Check digit selection must be **G** to generate check digit.

221 Primary or secondary price format is outside the range **1** to **15**.

222 Data type restriction is outside the range of **1** to **6**.

223 Option is not valid for the field.

224 Bar code Intercharacter gap must be **0** to **99** in printer dots.

251 Power up mode must be **0** (online) or **1** (offline).

252 Language selection must be **0** (English).

253 Batch separator code must be **0** (off) or **1** (on) in the system setup packet.

254 Slash zero selection must be **0** (standard zero) or **1** (slash zero).

255 Supply type must be **0** (black mark) or **1** (die cut).

256 Ribbon selection must be **0** (direct) or **1** (transfer).

257 Feed mode must be **0** (continuous) or **1** (on-demand).

258 Supply position is outside the range.

259 Contrast adjustment must be **-390** to **156** dots.

260 Print adjustment must be **-99** to **99** dots.

261 Margin adjustment must be **-99** to **99** dots.

262 Speed adjustment is invalid.

263 Primary monetary symbol is invalid.

264 Secondary symbol selection must be **0** (none) or **1** (print secondary sign).

265 Monetary decimal places must be **0** to **3**.

266 Character string length in Packet **E** must be **5** (MPCL control characters) or **7** (ENQ/IMD command character).

267 Baud rate selection must be **0** (1200), **1** (2400), **2** (4800), **3** (9600), **4** (19.2), or **5** (38.4).

268 Word length selection must be **0** (7 bits) or **1** (8 bits).

269 Stop bits selection must be **0** (1 bit) or **1** (2 bits).

270 Parity selection must be **0** (none), **1** (odd), or **2** (even).

271 Flow control selection must be **0** (none), **1** (DTR/DSR), **2** (CTS/RTS), or **3** (XON/XOFF).

272 Internal code page selection must be **0** (Internal), **1** (ANSI), **2** (DOS 437), or **3** (DOS 850).

273 Cut adjustment must be **-300** to **300** dots.

282 RS232 Trailer string is too long. Use a maximum of **3** characters.

283 ENQ Trailer string is too long. Use a maximum of **3** characters.

284 The buffer type must be **T** (transmit), **R** (receive), **I** (image), **F** (format, batch data, and graphics), **D** (downloadable fonts), or **V** (vector/scalable fonts).

285 The storage device type must be **N** (non-volatile RAM) or **R** (volatile RAM).

286 The buffer size is invalid.

287 The printhead width is invalid.

290 Action must be **0** (disable) or **1** (enable) for Backfeed Control.

291 Dispense position must be **50** to **200** dots and/or the backfeed distance is greater than the dispense position.

292 Backfeed distance must be **10** to **200** dots.

310 Check digit scheme number must be **1** to **10**.

311 Modulus must be **2** to **11**.

314 Check digit algorithm must be **D** (sum of digits) or **P** (sum of products).

325 Duplicating direction must be **0** or **1**.

327 Amount of row adjustment must be **0** to **999**.

328 Duplicate count must be **0** to **999**.

340 Bitmap line encoding must be **H** (Hex) or **R** (Run length).

350 Font selector must be **1** to **9999**.

351 Font data length must be **68** to **16384**.

352 Insufficient font memory is available for the downloaded font.

380 Job request is outside the range **0** to **4**.

400 Invalid character following **{**.

401 Internal software failure. Call Technical Support.

402 Field separator is not in the expected location.

403 Field separator was not found.

404 The number or string that is currently being processed is too long.

405 Too many fields exist in the format.

Communication Failures

Errors 409 to 413 usually indicate a communication failure. These errors happen when the host and the printer cannot communicate. Ask your System Administrator for help.

Error **Description/Action**

409 Printer memory is full.

410 Parity mismatch.

411 Framing error (baud rate mismatch).

412 Flow control mismatch.

413 Receive buffer is full. Check flow control settings.

414 Internal keyboard buffer is full or you need a new keypad.

427 Format name must be **1** to **8** characters inside quotes or a printer-assigned name ("").

428 Batch name is invalid or graphic not found.

429 A field number appears more than once in a format.

430 The format uses a graphic file that cannot be found.

433 The batch references a field number that does not exist in the format.

497 Error occurred during the parallel port loop back test.

499 Error occurred during the serial port loop back test.

Data Formatting Errors

Errors 571 to 618 are data formatting errors. This type of error happens when a field prints incorrectly. Your System Administrator can correct the format, batch, or graphic packet and send the print job again. For errors 571 to 614, the printer will still print, but the data may be incomplete, missing, or wrong.

Error **Description/Action**

571 UPC or EAN bar code data length in the batch doesn't fit the format.

572 Batch data doesn't fit the format, the field contains blanks, or data mismatch.

573 Batch data in price field doesn't fit the format or the field contains blanks.

574 Batch data in check digit scheme doesn't fit the format, or, the field contains blanks.

575 The graphic included in your format could not be found.

600 Imaging error because the batch was refused.

601 An error occurred while the batch was imaging.

602 The batch was not found during imaging.

611 Font, bar code, or density in the batch doesn't fit the format.

612 Batch data is missing or doesn't match the format.

613 Reference point off tag.

614 Portion of field off tag.

615 Bar code width is greater than 16 inches, or keywords on PDF 417 bar code exceed **928**.

616 A bad dot falls on a bar code and the dot cannot be shifted. Call Customer Service to order a new printhead or printhead kit.

618 Magnification must be **1** to **7**.

Machine Faults

Errors 700 to 765 happen when there is a problem with the printer.

Error	Description/Action
700	An error is pending, and the printer cannot continue with the batch.
701	Printer received a command that it cannot execute while it is running.
702	Check your printer's SETUP settings.

703 The printer sensed a calibration of different-sized black marks.

704 Printer didn't detect a sense mark within the maximum feed length or is out of supplies. Check or load supplies.

705 Invalid batch received.

750 Printhead is overheated, turn off the printer to let it cool.

751 Printer didn't detect a sense mark when expected.

752 Printer detected a sense mark in the wrong place.

753 Printer detected a sense mark that is too long.

754 Out of ribbon or ribbon jam. Check or load ribbon. Remove any slack in the ribbon by turning the take-up reel clockwise.

755 Printhead is open. Close the printhead.

756 Out of supplies. Load supplies.

757 Reload supplies (supply length mismatch).

758 The supply was not seen or the on-demand sensor is not working correctly. Check for a supply jam. Clear the supply path or reload supplies. This error may occur if you remove a label too quickly in the on-demand mode. The printer does not recalibrate after this error.

759 Knife is not moving. Call Technical Support.

760 Knife jam. Remove any jammed tags from the knife. Call Technical Support.

761 Stacker is full or jammed. Empty the stacker or clear the jam before continuing. The printer does not recalibrate after this error.

762 Low battery. Recharge the battery.

763 Waiting to dispense label. Press **Feed**.

764 Verifier failure. Press **Clear** to clear the error and continue printing. A blank label feeds and the last label reprints.

765 The printhead has less than four bad dots. The printer can shift bar code fields to avoid bad dots. Press **Clear** to continue printing. Print a test label to confirm the number of bad dots.

768 Printhead has more than 10 bad dots or is not connected. Make sure the printhead is connected. If necessary, call Customer Service to order a new printhead or printhead kit.

770 The print motor is not ready. Call Technical Support.

771 The format specified by the application was not found. Reload your application and format and try again.

790 The printer is busy. Wait until the printer is idle (not receiving data or no batch waiting to print) before you send any packets. This error may occur when you try to print a test label if the printer is busy.

791 The printer has an error pending. Turn off the printer. Wait 15 seconds and turn it back on. Resend the packets.

792 The printer is not initialized. Call Technical Support.

793 The printer job queue is full. Turn off the printer. Wait 15 seconds and turn it back on. Resend the packets.

Errors numbered 900-999 are hard printer failures. Call Service if you receive these messages.

SPECIFICATIONS & ACCESSORIES

A

Printer

Height:	12.5 inches (318 mm)
Width:	12 inches (305 mm)
Depth:	13 inches (330 mm)
Weight:	30 lb. (13.4 kg)
Shipping Weight:	34 lb. (15.4 kg)
Power:	115 Vac, 60Hz, 100 Vac, 50/60 Hz, 230 Vac, 50Hz
Operating Limits:	For Thermal Transfer (ribbon) 40° to 95° F (4° to 35° C) For Thermal Direct 40° to 104° F (4° to 40° C)
Printhead:	Thermal at 4 inches (102 mm) wide 203 dpi (8.0 dots per mm)
Printing Method:	Thermal Transfer (ribbon) or Thermal Direct
Print Speed:	◆ 2.5 IPS (64 mm) for all serial bar codes ◆ 2.5 IPS (64 mm), 4.0 IPS (102 mm), or 6.0 IPS (152 mm) for other operations

We recommend a print speed of 2.5 IPS for labels less than two inches long using backfeed or on-demand mode printing.

Supplies

For high temperature or high humidity environments, contact Monarch for supply recommendations. Non-indexed supply does not have perforations or black marks and must be used in continuous mode. Use continuous supply with the optional tear bar or the optional knife.

Supply Types: Thermal Transfer or Direct

Supply Widths: .75 inches (19 mm) minimum
4.25 inches (108 mm) maximum

Supply Lengths: .75 inch (19 mm) minimum
16.0 inches (406 mm) maximum

Ribbon Specification

Ribbon Storage: Do not leave ribbon in direct sunlight, high temperatures, or high humidity.

Ribbon Type: Standard or High Energy

Ribbon Widths: 1.3 inches (33 mm)
1.6 inches (41 mm)
2.16 inches (55 mm)
3.15 inches (80 mm)
4.13 inches (105 mm)

Ribbon Length: 23,600 inches (600 meters)

About Ribbons

The width of the ribbon must be greater than the supply width. Since some supplies are more abrasive to printheads than others, using a ribbon wider than your supply helps protect the printhead. Replacement printheads are expensive.

Knife

The knife is **optional** for the 9835 printer.

Height:	8.5 inches (216 mm)
Width:	9.3 inches (236 mm)
Depth:	7.6 inches (193 mm)
Weight:	9 lb. (4.1 kg)
Shipping Weight:	9.5 lb. (4.3 kg)

Tag Cut Dimensions:

Thickness:	.007 inches (.18 mm) minimum .010 inches (.25 mm) maximum
Widths:	1.2 inch (30 mm) minimum 4.0 inches (102 mm) maximum
Lengths:	1.2 inches (30 mm) minimum 16 inches (406 mm) maximum

Accessories

- Internal TwinAx/CoAx Protocol Converter Part # 117532
- LAN Print Server RJ-45 Connector (10BaseT) Part # 11753101
  BNC Connector (10Base2) Part # 11753102
- Printhead Assembly Kit Part # 11797101, 03, or 06 (available as single, three, or six pack)
- Ribbon Take-up Core Part # 11796120, 30, or 40 (available in two, three, or four inches)
- High Energy Ribbon
- 917™ Keypad
- 918™ Verifier
- 926™ Knife
- 928™ Stacker
- Peel mode with on-demand sensor
- Tear Bar
- Metal Cover

You can use either the optional knife or peel mode, but not both. If you purchased the optional knife, you cannot use the optional tear bar.

GLOSSARY

The following terms will help you use this manual.

continuous mode	Mode in which the printer prints all the labels in the batch without stopping.
download (send)	Transmission of data from the host to your printer.
format	Supply layout or design, which the *System Administrator* downloads as a format packet to your printer.
host	Any mainframe, minicomputer, data collect terminal, or personal computer sending data to the printer.
LCD	Display on the printer used to indicate printer conditions and problems.
MONARCH leader	Wrap around a new roll of ribbon with Monarch printed on it.
on-demand mode	Mode in which the printer stops after each label to allow you to remove it.
print job	Actual data printed on a label or tag. The host may download the print job together with the format, or as a separate packet. The print job is also called a "batch."
online	Direct communication between a computer and the printer.
Supply Sensor	Senses whether supply is loaded or needs to be loaded in the printer. Located in the supply path.
Supplies	Labels used for printing.
System Administrator	Person responsible for creating and downloading packets.

For supplies, service, or assistance call toll free:

1-800-543-6650 (In the U.S.A.)
1-800-263-4650 (In Canada)

www.monarch.com